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EXAMINER

LEUNG, WAI LUN

ART UNIT

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2613

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/785,617	Applicant(s) LOOK, CHRISTOPHER M.	
	Examiner DANNY W. LEUNG	Art Unit 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12202007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/20/2007 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

4. Claim 1 requires “the optical transceiver putting an identification into the first optical signal to send with the first optical signal to the WSM to allow the WSM to determine if the second optical signal corresponds to the first optical signal”. However, according to the specification, WSM does not appear to be capable of performing such determination. According to the specification as originally file, this determination is being performed by a processor, which is separate from the WSM as illustrated in (*fig 1A*) .

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 23-25 are rejected under 35 U.S.C. 102(e) as being anticipated by **Hayashi et al.** (US007151893B2).

Regarding to claim 23, **Hayashi** discloses a method comprising: sending a first optical signal from an optical transceiver (*fig 3, 148*) to an input port (*fig 3, #1*) of a wavelength switch module WSM) (*fig 3, XC120*), wherein the first optical signal passes through the WSM via a channel within the WSM (*col 9, ln 22-43*);

in response to the WSM receiving the first optical signal, causing a processor to look up a wavelength designated to the channel (*col 9, ln 44-col 10, ln 17*); and

checking whether the optical transceiver is at the wavelength designated to the channel (*col 9, ln 61-col 10, ln 5*).

As to claim 24, **Hayashi** further teaches tuning a light source of the optical transceiver to the wavelength designated to the channel if the optical transceiver is not at the wavelength designated to the channel (*col 6, ln 1-15*).

As to claim 25, **Hayashi** further teaches wherein causing the processor to look up the wavelength comprises sending an interrupt to the processor upon detection of the first optical signal at the input port of the WSM (*col 7, ln 1-10*).

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Hayashi et al.** (*US007151893B2*), in view of **Wang et al.** (*US007035537B2*).

Regarding claim 26, **Hayashi** teaches a method for commissioning in an optical network node comprising:

transmitting an optical signal of a given wavelength from an optical transceiver (*fig 3, 148*) that is in the optical network node (*fig 3, Node B*), wherein a laser of said optical transceiver is connected to one of a plurality of add ports (*fig 3, port #1*) on a wavelength switch modules (WSM) in said optical network node (*col 9, ln 6-60*), wherein a light receiver (*fig 3, 134*) of said optical transceiver is connected to a corresponding one of a plurality of drop ports (*fig 3, port #1*) on the WSM, and wherein a default configuration for the WSM is to pass through a received optical signal from add port to corresponding drop port (*fig 5*);

detecting the optical signal in the one of the WSM (*fig 3, 134*);

based on said detecting of the optical signal, determining the wavelength handled by the WSM from the configuration information (*col 10, ln 6-23*);

detecting the optical signal at the optical transceiver (*fig 3, 134*);

correlating said detectings to determine that the optical transceiver is connected to the the WSM (*col 10, ln 6-23*); and

determining if the wavelength of the optical signal matches the wavelength handled by the WSM (*col 10, ln 17-34*).

Hayashi does not disclose expressly wherein said wavelength switch module is one of a plurality of wavelength switch modules in said optical network node; wherein at least some of said plurality of WSMs handle different wavelengths than others and wavelengths handled by each of said plurality of WSMs are tracked in configuration information of a corresponding WSM. **Wang**, from the same field of endeavor, teaches a method for commissioning in an optical network node (*fig 2*) comprising: transmitting an optical signal of a given wavelength from an optical transceiver (*fig 2, 42*) that is in the optical network node, having a wavelength switch module (*fig 2, 43*) is one of a plurality of wavelength switch modules (*fig 2, 43_L, ...43_M*) in said optical network node; wherein at least some of said plurality of WSMs handle different wavelengths than others and wavelengths handled by each of said plurality of WSMs are tracked in configuration information of a corresponding WSM (*col 3, ln 33-col 4, ln 7*) . Therefore, it would have been obvious for a person of ordinary skill in the art at the time of invention to substitute a plurality of WSMs which handle different wavelengths than others and wavelengths handled by each of said plurality of WSMs are tracked in configuration information of a corresponding WSM onto **Hayashi's** system as suggested by **Wang**, since one of ordinary skill in the art could have substituted one known element such as a plurality of WSMs as shown in (*fig 2*) of **Wang** for another element such as **Hayashi's** switch module 120, and the results of the substitution would have been predictable.

9. Claims 1, 3-8, 13, 16-18, and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wang et al.** (*US007035537B2*), in view of **Frigo et al.** (*US005708753A*).

Regarding claims 13 and 18, **Wang** discloses a system (*fig 1B*) comprising:

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an optical network including a plurality of optical fibers (*fig 1B, 32, 34, 35, 36*); and a first optical network node (*fig 1B, 10*), coupled to the optical network, the first optical network node comprising:

a wavelength switch module (WSM) (*fig 2, 43*);

an optical transceiver (*fig 2, 42*), detachably coupled to the WSM, to send a first optical signal to the WSM (*col 3, ln 53-65*) and to detect a second optical signal received from the WSM after sending the first optical signal (*col 4, ln 29-col 5, ln 30*); and a set of one or more processors (*fig 2, 47*) coupled to the WSM to automatically determine whether the second optical signal corresponds to the first optical signal in response to an interrupt from each of the WSM and the optical transceiver (*col 5, ln 1-50*)

Wang does not disclose expressly wherein the optical transceiver comprises an encoder to put an identification into the first optical signal to send with the first optical signal to the WSM. **Frigo**, from the same field of endeavor, teaches a system comprising an optical transceiver (*fig 1, ONU 150*) , detachably coupled to a wavelength switch module (*fig 1, CO 100*) , to send a first optical signal to the WSM and to detect a second optical signal received from the WSM after sending the first optical signal (*col 3, ln 28-40*) , wherein the optical transceiver comprises an encoder to put an identification into the first optical signal to send with the first optical signal to the WSM (*col 2, ln 49-55*) ; and a set of one or more processors coupled to the WSM to automatically determine whether the second optical signal corresponds to the first optical signal in response to the identification and an interrupt from each of the WSM and the optical transceiver (*col 2, ln 56-65*) . Therefore, it would have been obvious for a person of ordinary skill in the art at the time of invention to apply the technique of using an encoder to put

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an identification into the first optical signal to send with the first optical signal to the WSM so as to determine whether the second optical signal corresponds to the first optical signal in response to such identification onto **Wang's** system as suggested by **Frigo**. It would have been obvious for a person of ordinary skill in the art at the time of invention to recognized that applying a known technique such as that of **Frigo's** onto **Wang's** base system upon which the claimed invention can be seen as an "improvement" would have yielded predictable results and resulted in an improvement system, since **Frigo's** teaching is capable of enhancing performance of identifying location of network failure.

Therefore, the rationale of applying a known technique (**Frigo's**) to a known system (**Wang's**) ready for improvement to yield predictable results has been clearly articulated herein with the *Graham* inquiries and findings as presented above. In *Dann v. Johnston* 525 U.S. 219, 189 USPQ257 (1976) The Court held that "[t]he gap between the prior art and respondent's system is simply not so great as to render the system nonobvious to one reasonable skilled in the art."

Regarding claims 9 and 10, **Wang** further teaches a machine-accessible medium that provides instructions that, if executed by a processor, will cause the processor (*fig 2, 47*) to perform the operations as discussed above regarding claims 13 and 18 as discussed above. **Frigo** also teaches such similar machine-accessible medium (*fig 4 403*). Therefore, it would have been obvious for a person of ordinary skill in the art at the time of the invention was made to combine **Wang and Frigo** for the same reason as stated above regarding claims 13 and 18.

As to claims 16 and 21, **Wang** further teaches wherein the WSM includes:

an input port (*fig 2, 45*);

an output port having a one-to-one correspondence with the input port (*fig 2, 46*);

a channel coupling the input port to the output port, wherein the first optical signal enters the WSM at the input port, passes through the channel, and exits through the output port (*col 4, ln 29-43*) .

As to claims 11, 17 and 22, **Wang** further teaches wherein the optical transceiver comprises a light source, which is tunable to a wavelength designated to the channel (*col 4, ln 44-47*).

As to claim 12, **Wang** further teaches wherein the operations further comprise: sending an error message if the light source is not at the designated wavelength (*col 5, ln 60-67*).

10. Claims 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wang et al.** (*US007035537B2*), in view of **Frigo et al.** (*US005708753A*), as applied to claims 13 and 18 above, and further in view of **Tsao et al.** (*US006504969B1*).

Regarding claims 15 and 20, **the combination of Wang and Frigo** discloses the system in accordance to claims 13 and 18 as discussed above. **It** does not disclose expressly wherein the optical transceiver includes a decoder to check whether the second optical signal includes the identification. However, **Frigo** teaches that the optical transceiver is capable of checking such ID signal and update the database in the WSM (*col 5, ln 1-11*). **Tsao**, from the same field of endeavor, teaches such encoder capable of checking whether the second optical signal includes the identification is common and well known. Therefore, it would have been obvious for a person of ordinary skill in the art at the time of invention to substitute such common and well known component onto **the combination of Wang and Frigo's** system as suggested by **Tsao**.

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One of ordinary skill in the art could have substituted one known element such as this decoder onto **the combination of Wang and Frigo's** system, and the result of being capable of checking such ID signal using the decoder would have been predictable.

As it is best understood by the examiner in view of the above 112 problems, claims 1, and 3-8 are rejected for the same reasons as stated above regarding claims 13, 16-18, and 21-22.

11. Claims 2, 14, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over over **Wang et al.** (US007035537B2), in view of **Frigo et al.** (US005708753A), as applied to claims 13 and 18 above, and further in view of **Kinoshita et al.** (US007076163B2).

Regarding claims 2, 14, and 19, **the combination of Wang and Frigo** discloses the limitations in accordance to claims 1, 13, and 18 as discussed above. **It** does not disclose expressly wherein determining whether the second optical signal corresponds to the first optical signal comprises: varying power of the first optical signal before the first optical signal exits the WSM; and measuring the second optical signal to determine whether power of the second optical signal changes in response to the varying of the power of the first optical signal. **Kinoshita**, from the same field of endeavor, teaches varying power of the first optical signal before the first optical signal exits the WSM (*using amplifiers 326 and 328, fig 9; col 13, ln 15-21*); and measuring a second optical signal to determine whether power of the second optical signal changes in response to the varying of the power of the first optical signal (*col 13, ln 32-47, EMS 290 performs monitoring, failure detection, protection switching and loopback or localized testing functionality; col 4, ln 39-42 indicated that such monitoring includes wavelengths, power, and quality parameters*). Therefore, it would have been obvious for a person of ordinary skill in the art at the time of invention to determine whether the second optical signal corresponds to the

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first optical signal by varying power of the first optical signal before the first optical signal exits the WSM; and measuring the second optical signal to determine whether power of the second optical signal changes in response to the varying of the power of the first optical signal in **the combination of Wang and Frigo's** system as suggested by **Kinoshita**. The motivation for doing so would have been to be able to evaluate signal power distortion over the transmission link while checking for transmission link integrity.

Furthermore, it would have been obvious for a person of ordinary skill in the art at the time of invention to recognized that applying a known technique such as that of **Kinoshita's** onto **the combination of Wang and Frigo's** base device/method/system upon which the claimed invention can be seen as an "improvement" would have yielded predictable results and resulted in an improvement system, since **Kinoshita's** teaching is capable of enhancing performance of transmission link integrity.

Therefore, the rationale of applying a known technique (**Kinoshita's**) to a known device/method/system (**the combination of Wang and Frigo's**) ready for improvement to yield predictable results has been clearly articulated herein with the *Graham* inquiries and findings as presented above. In *Dann v. Johnston* 525 U.S. 219, 189 USPQ257 (1976) The Court held that "[t]he gap between the prior art and respondent's system is simply not so great as to render the system nonobvious to one reasonable skilled in the art."

Response to Arguments

12. Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

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13. The prior art made of record in previous actions and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANNY W. LEUNG whose telephone number is (571)272-5504. The examiner can normally be reached on 11:30am-9:00pm Mon-Thur.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. W. L./
Examiner, Art Unit 2613
March 26, 2008

/Jason Chan/
Supervisory Patent Examiner, Art Unit 2613